

What is Claimed is

- [c1] 1.A method for introducing a new supplier into a product design and manufacturing system, comprising the steps of:
initiating a new supplier introduction process;
receiving new supplier information relating to the new supplier;
receiving material information relating to a particular material to be supplied;
receiving product information relating to a particular product to be manufactured which will include the particular material;
progressing through a series of supplier introduction stages wherein the new supplier introduction is progressed from initiation through manufacture/implementation;
receiving information relative to each stage in the series of introduction stages;
holding a stage tollgate for each stage in the series of introduction stages;
determining, in each stage in the series of introduction stages, whether the new supplier introduction process should advance from a current stage to a next stage.

[c2] 2.The method of claim 1, wherein the step of progressing through a series of supplier introduction stages further comprises the steps of:
progressing through a first stage relating to identification and inception of a new supplier introduction program;
progressing through a second stage relating to a launch of the new supplier introduction program;
progressing through a third stage relating to material qualification for the material to be supplied by the new supplier;
progressing through a fourth stage relating to scale-up and customer sampling of products made using the material to be supplied by the new supplier;
progressing through a fifth stage relating to purchasing and implementation of the material; and
progressing through a sixth stage relating to monitoring the performance of the material supplied by the new supplier.

[c3] 3.The method of claim 2, wherein the step of progressing through a first stage relating to identification and inception of the new supplier introduction program

further comprises the steps of:

determining whether a first stage tollgate should be passed indicating that the new supplier initiative has been approved for introduction;
permitting advancement to the second stage if it is determined that the first stage tollgate has been passed.

- [c4] 4.The method of claim 2, wherein the step of progressing through a second stage relating to a launch of the new supplier introduction program further comprises the steps of:
determining whether a second stage tollgate should be passed indicating that the new supplier introduction has been approved for further development;
permitting advancement to the third stage if it is determined that the second stage tollgate has been passed.
- [c5] 5.The method of claim 2, wherein the step of progressing through a third stage relating to material qualification program further comprises the steps of:
determining whether a third stage tollgate should be passed indicating that the material to be supplied by the new supplier has been qualified;
permitting advancement to the fourth stage if it is determined that the third stage tollgate has been passed.
- [c6] 6.The method of claim 2, wherein the step of progressing through a fourth stage relating to scale-up and customer sampling further comprises the steps of:
determining whether a fourth stage tollgate should be passed indicating that scale-up samples have met customer approval;
permitting advancement to the fifth stage if it is determined that the fourth stage tollgate has been passed.
- [c7] 7.The method of claim 2, wherein the step of progressing through a fifth stage relating to purchase and implementation of the new material further comprises the steps of:
determining whether a fifth stage tollgate should be passed indicating that any issues and concerns regarding production have been adequately addressed;
permitting advancement to the sixth stage if it is determined that the fifth stage

tollgate has been passed.

- [c8] 8.The method of claim 2, wherein the step of progressing through a sixth stage relating to performance monitoring further comprises the steps of: determining whether a sixth stage tollgate should be passed indicating that any issues have been resolved and the program should be closed; closing the program if it is determined that the sixth stage tollgate has been passed.
- [c9] 9.The method of claim 2, wherein the step of progressing through a first stage relating to identification and inception of a new supplier introduction program, further comprises the steps of: initiating a global specification process; analyzing environmental health and safety related risks; assessing the effects of the new supplier on customers; identifying required technical customer needs which relate to the new supplier; and conducting a new supplier risk assessment to explore the potential external and internal risks and benefits.
- [c10] 10.The method of claim 2, wherein the step of progressing through a second stage relating to a launch of the new supplier introduction program, further comprises the steps of: reviewing a questionnaire related to environmental health and safety for completeness and required follow-up activities; evaluating the project for compliance with applicable food/medical/toy regulations; developing a project timeline and resourcing plan; and conducting a project risk assessment.
- [c11] 11.The method of claim 2, wherein the step of progressing through a third stage relating to material qualification for the material to be supplied by the new supplier, further comprises the step of: validating material test methods.

- [c12] 12.The method of claim 2, wherein the step of progressing through a fourth stage relating to scale-up and customer sampling of products made using the material to be supplied by the new supplier, further comprises the step of:
finalizing a global specification; and
obtaining any required agency approvals.
- [c13] 13.The method of claim 2, wherein the step of progressing through a fifth stage relating to purchasing and implementation of the material, further comprises the steps of:
translating the material to additional sites or businesses;
determining whether the new supplier has demonstrated manufacturing capability; and
developing a control and audit plan.
- [c14] 14.The method of claim 2, wherein the step of progressing through a sixth stage relating to monitoring the performance of the material supplied by the new supplier, further comprises the steps of:
conducting a manufacturing capability audit; and
determining field performance of the material.